

# Impulse Pressure

## Test Systems

### Fluid Power Capabilities

Wineman Technology is an industry leader in fluid power test systems. From building complex avionic systems to testing a single critical component, our solutions are designed and built to maximize performance and reliability. By applying sound engineering, creativity, and a full understanding of the customer's testing needs, we develop custom turnkey test stands for system, sub-system, or component-level products or machinery modernization. We also provide high levels of flexibility using commercial off-the-shelf technologies.

We match each physical test system with high performance controls, from simple open loop PC- or PLC-based controls to embedded real-time systems utilizing the latest innovations in control and instrumentation hardware. Many customer solutions include cutting-edge FPGA and system technologies that marry multiple control platforms.

The heart of any good control system is the application software. Whether developing a custom LabVIEW™ application to meet a specific requirement or using our proven *INERTIA*™ control and automation suite, our solutions always provide an intuitive, highly flexible test environment with overall capabilities previously unattainable at its cost point.

### Impulse Pressure Test Stands

Wineman Technology Inc. provides state-of-the-art, custom Impulse Pressure Test Stands for all industries. From small tabletop or portable systems to multiple unit chambers, Wineman Technology can provide a system to meet all of your testing requirements.

#### Standard Test Parameters Include:

- A variety of test fluids to meet your product testing applications
- Test fluid pressures up to 60,000 psi
- System flow rates up to 200 gpm
- Test frequencies up to 10 Hz
- Pressure profiles from simple square waves to the more complex 20-point aerospace wave forms



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## WINEMAN TECHNOLOGY IMPULSE PRESSURE TEST STAND CAPABILITIES \*

- Control :**
- Wineman Technology's standard or custom real-time process control utilizing National Instruments LabVIEW™ software and Horner PLC solutions
  - 19-inch monitor, mouse, and keyboard
- Test Chamber :**
- Test chambers with horizontal or vertical orientation designed to suit the unit under test (UUT) size, number of UUTs being tested, and UUT weights
  - Portable to fixed placement systems
  - Perforated work surface designed to capture, filter, and reuse lost fluid
- Power :**
- Single- or three-phase power systems with 110 VAC or 24 VDC control power
- Testing Fluids :**
- Air, water, glycol mixtures, oils, phosphate esters, and AFT fluids among others
- Test Pressures :**
- 500 psi, 1,000 psi, 3,000 psi, 5,000 psi, 10,000 psi, 14,500 psi, 20,000 psi, 30,000 psi, 40,000 psi, and 60,000 psi service rated systems
  - Pressure rate of rise curves to suit your application
- Input Flows :**
- Input flow rates up to 200 gpm
- WTI Impulse System Standard Software Package :**
- Proof, proof then impulse, and impulse to burst testing modes
  - PC-based control system utilizing National Instruments hardware
  - Automatic, manual, and learn-in modes
  - Standard test screen that provide entry points for part serial number or test ID number, part description, technician ID and comments, lab report number, and selection of a previously created test profile (created in test configuration screen)
  - Indicator screen that provides annunciating system safety interlocks, system faults, and display of system pressure versus time
  - Test sequences that run to either completion or to a detection of a fault
  - Preset or user-configurable pressure test frequencies, ramp rates (psi/sec), stepped pressure control, hold times, maximum pressure selections, and control point selection
  - Data that is automatically sequenced and stored with references to the test date
  - Collected data that is saved and downloadable as delimited text files for easy access with Microsoft Excel
  - Wineman Technology's standard or custom data reporting and charts
- Standard Options :**
- Available options include combination impulse, pressure pulsation, and burst test stands
  - Temperature-controlled test chambers and fluid temperature control (FTC) systems from -40°F to 350°F
  - Observation windows or interior high speed cameras
  - Carbon steel or stainless steel fluid systems and chambers
  - Test sumps for submerged testing
  - Test frames or fixtures to suit
  - Multiple or isolated UUT channels for parallel UUT testing
  - On-board or facility fluid supply systems
  - Manual or automatic part filling and purging
  - Tests in accordance to SAE, API, ISO, APR, ASTM, etc.
  - On-board printer

\*Specifications subject to change without notice.